

ABSTRACT OF THE DISCLOSURE

A double-gate semiconductor device includes a substrate, an insulating layer, a fin and a gate. The insulating layer is formed on the substrate and the fin is formed on the insulating layer. The fin has a number of side surfaces, a top surface and a bottom surface. The gate is formed on the insulating layer and surrounds the top surface, bottom surface and the side surfaces of the fin in the channel region of the semiconductor device. Surrounding the fin with gate material results in an increased total channel width and more flexible device adjustment margins.